

WHAT IS CLAIMED IS:

1. A transmission power control method for controlling the power to transmit to the distant party, comprising:

5 a variable power amplifying step of respectively controlling digital-to-analog converter for generating an analog baseband signal to be supplied to a modulator and provided in the former stage of a modulator for frequency-converting a transmission signal to a signal in a IF band, and a plurality
10 of variable power amplifiers for variably amplifying the transmission signal modulated by the modulator.

2. A transmission power control method according to claim 1, wherein a control ratio of the variable power amplifiers
15 is modified and at least one of series and parallel control in a control range is made in the variable power amplifying step.

3. A transmission power control method according to claim 2, further comprising:
20 a detection step of detecting a state of at least one of a local station and a distant station; and

a modification step of modifying the control ratio according to the detected state.

25 4. A transmission power control method according to

claim 3,

wherein a plurality of the states of at least one of the local station and the destination station are detected in the detection step,

5 wherein the control ratio is modified by using fuzzy control rules and fuzzy inference that are based on the plurality of states in the modification step.

10 5. A transmission power control method according to claim 3,

wherein the control ratio according to the state of at least one of the local station and the distant station is adaptively modified in the modification step.

15 6. A transmission power control method according to claim 1, wherein a control sensitivity of each of the plurality of variable power amplifiers differs from each other.

20 7. A transmission power control method for controlling the power to transmit to the distant party, comprising:

a voltage controller controlling step of controlling a plurality of voltage controllers that control a power amplifier for amplifying a transmission signal via separate bias systems.

25 8. A transmission power control method according to

claim 7,

wherein control ratio of the voltage controllers are modified and at least one of series and parallel control in a control range is made in the voltage controller controlling step.

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9. A transmission power control method according to claim 8, further comprising:

a detection step of detecting the state of at least one of a local station and a distant station; and

10 a modification step of modifying the control ratio according to the detected state.

10. A transmission power control method according to claim 9,

15 wherein a plurality of the states of at least one of the local station and the destination station are detected in the detection step,

wherein the control ratio is modified by using fuzzy control rules and fuzzy inference that are based on the plurality
20 of states in the modification step.

11. A transmission power control method according to claim 9,

wherein the control ratio according to the state of at
25 least one of a local station and a distant station is adaptively

modified in the modification step.

12. A transmission power control method according to claim 7,

5 wherein a control sensitivity of each of the plurality of variable power amplifiers differs from each other.

13. Radio communications apparatus equipped with a transmission power control feature for controlling the
10 transmission power to be transmitted to a distant station, comprising:

a variable power amplification unit including a modulator for frequency-converting a transmission signal to a signal in an IF band, a digital-to-analog converter provided in the former
15 stage of the modulator for generating an analog baseband signal to be transmitted to the modulator, and a plurality of variable power amplifiers for variably amplifying the transmission signal modulated by the modulator; and

a variable power amplification control unit for
20 controlling the variable power amplification unit.

14. Radio communications apparatus according to claim 13, wherein the variable power amplification control unit modifies a control ratio of the variable power amplifier and
25 make at least one of series and parallel control in the control

range.

15. Radio communications apparatus according to claim 14, further comprising:

5 a state detection unit for detecting the state of at least one of a local station and a distant station,

wherein the variable power amplification control unit modifies the control ratio according to the detected state.

10 16. Radio communications apparatus according to claim 15, wherein the variable power amplification control unit modifies the control ratio based on the fuzzy control rules and fuzzy inference.

15 17. Radio communications apparatus according to claim 15, wherein the variable power amplification control unit adaptively modifies the control ratio according to the state of at least one of a local station and a distant station.

20 18. Radio communications apparatus according to claim 13, wherein a control sensitivity of each of the plurality of variable power amplifiers differs from each other.

25 19. Radio communications apparatus equipped with a transmission power control feature for controlling the

transmission power to be transmitted to the distant station,
comprising:

- a power amplifier for amplifying a transmission signal;
- a plurality of voltage controllers for controlling the
- 5 power amplifier via separate bias systems; and
- a control unit for controlling voltage controllers that controls said voltage control.

20. Radio communications apparatus according to claim
10 19, wherein the control unit for controlling voltage controllers modifies a control ratio of the voltage controllers and make at least one of series and parallel control in the control range.

21. Radio communications apparatus according to claim
15 20, further comprising:

a detection unit for detecting a state of at least one
of a local station and a distant station

wherein the control unit for controlling voltage
controllers modifies the control ratio according to the detected
20 state.

22. Radio communications apparatus according to claim
21, wherein the control unit for controlling the voltage
controllers modifies the control ratio based on the fuzzy control
25 rules and fuzzy inference.

23. Radio communications apparatus according to claim
21, wherein the control unit for controlling the voltage
controllers adaptively modifies the control ratio according to
5 the state of at least one of a local station and a distant station.

24. Radio communications apparatus according to claim
19, wherein the control sensitivity of each of the plurality
of variable power amplifiers differs from each other.

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